Reviewer’s report

Title: Tuberculosis Infectious pool and associated factors in East Gojjam Zone, Northwest Ethiopia

Version: 0 Date: 27 Aug 2019

Reviewer: Kelemework Adane

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Version 1: Date: 27/08/2019
Reviewer: Dr. Kelemework Adane.
Title: Tuberculosis Infectious pool and associated factors in East Gojjam zone, Northwest Ethiopia
General comments
This is an interesting piece of work which gives valuable information on the pool of potential infectious cases in the community which in turn guides TB programmers to act accordingly. However, I have the following comments (most minor issues) that I think need to be addressed before publication.

Abstract

1. Lines 10-11: Good to mention the number and name of districts (30% of the 19)

2. Line 19-20: Just a minor note; …identify factors of TB infectious period (do you mean factors for the variations in the TB infectious pool)

3. Lines 41-42: it seems that all items in the socio-demographic, behavior, and clinical profile of etc are associated- please modify or you may leave it out from the conclusion (already mentioned in the results part). For example, behavior is self is extensive (it could be bad or good etc) and we do not really know here what type of behavior is associating.

4. Line 33: please expand PTB (as it is in the first use)

Introduction

I have only minor comments on the introduction
1. In general, the introduction could be shortened (a bit long) even though the justification is convincing. I am not sure if it is the journal's style but here I would prefer to mention only the objective following the justification for the research question (significance and implication could be discussed somewhere in the discussions part rather)
2. Line 4: Mycobacterium Tuberculosis: "T" should be small and "Mycobacterium Tuberculosis" should be in italics. Please do the same throughout the text if any.

3. Line 18: Expand the word "MDR" as it is in first use

4. Lines 8-9: Check the TB death, it was not 1.6 million (it was 1.3 million plus 300,000 in those HIV co-infected)

Methods:

1. Lines 44-51: I am afraid that the selection seems purposive (all districts close to each other, all in one side of Debre Markos). It may happen by chance of course.


3. Lines 14-21: TB management time of relapse: Not clear for me why the time is counted from treatment completed/cured? Is that not from the re-occurrence of TB symptoms rather? I suppose such patients may remain non-infectious until a relapse may occur later due to some factors.

4. Lines 37-41: If you used only the smear-positive cases to estimate the infectious pool of undiagnosed TB cases, wouldn't it underestimate the final infectious pool (of these cases, because there are also smear-negative undiagnosed TB cases)?

Results and discussion:

1. Table 2: Other comorbidities: please mention some of those comorbidities under a footnote.

2. Lines 41-42: Mention the odds ratio for the rural vs. urban as well.

3. Discussion needs to be improved. I meant it is great to compare the findings with previous studies and provide justifications for the variations (as you already did) but I would like to suggest that the potential public health/clinical implication of the findings should also be clearly mentioned. Just things like you mentioned from line 50-56.

4. I do not think that the private clinic issue is a limitation of this study; of course, it would have implications on your findings and that should be mentioned in the discussion part. This is a limitation from the health service and not something that you had compromised.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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